

REMARKS

Claims 38-41 are canceled without prejudice or disclaimer. Claims 1-16 and 33-37 are pending.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

I. The Rejection of Claims 1, 4-16 and 33-41 under 35 U.S.C. 112

Claims 1, 4-16 and 33-41 are rejected under 35 U.S.C. 112, first paragraph, for allegedly lacking enablement. The Office contends that the phrase "a particulate component having a mean size of more than 40 μ m in the longest dimension" is indefinite because there is more than one possible meaning in that the phrase "particulate component" may be either a single particle or more than one particle. The Office states that Applicants themselves admit that there is more than one interpretation to this phrase. This rejection is respectfully traversed.

The indefiniteness rejection is not valid. A single particle cannot by itself have a mean size. A "mean", by definition, is the average value of a set of numbers, thus the mean size of particulate component is by definition the average value of the particles that make up the particulate component. (See the specification at page 8, line 1-10). Thus, the only interpretation of the phrase "a particulate component having a mean size of more than 40 μ m in the longest dimension" is that there is more than one particle, otherwise the claim language simply does not make sense. Accordingly, even if the phrase "particulate component" can have two meanings in the abstract, this phrase cannot have two meanings in the context of the recited claim language. (Note: The Office itself acknowledges that the specification uses the term particulate component to refer to more than one particle, in particular, the Office points out that the specification teaches that the particulate component is a "collection of particles." See page 3 of the Office Action, citing to page 9-10 of the specification.)

Therefore, an artisan would plainly understand that the phrase "particulate component" refers to more than one particle, i.e., the particles of the particulate component. In fact, this is the only interpretation in the context of the claim, and the Office's assertion that there are two possible interpretations for the phrase "particulate component" is not valid.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

II. The Rejection of Claims 38-41 under 35 U.S.C. 112

Claims 38-41 are rejected under 35 U.S.C. 112, as allegedly lacking written description. This rejection is rendered moot as claims 38-41 have been deleted.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

III. The Rejection of Claims 1, 4-16 and 33-41 under 35 U.S.C. 102

Claims 1, 4-16 and 33-41 are rejected under 35 U.S.C. 102 as allegedly anticipated by Herrman et al. This rejection is respectfully traversed.

In Applicants' prior response, Applicants pointed out that Herrman et al. does not anticipate the claimed invention because Herrman et al. does not teach a process for a process for making an enzyme containing granule in a mixer granulation process which includes the step of "adding less than 75 of 100 parts by weight of a particulate component having a mean size of more than 40 μ m in the longest dimension to more than 25 of 100 parts by weight of an enzyme or enzyme and granulating agent." In particular, Herrman et al. teaches that the particulate component (organic flour) is added in the process in an amount of 75 to 99.9 parts by weight and the enzyme or enzyme mixture is added in an amount of 0.1 to 25 parts by weight.

The Office responds by alleging that (1) Applicants do not explain where the amounts of dry enzyme Applicants assert Herrman et al. teaches are found in Herrman et al.; (2) it is not clear how Applicants can challenge that Herrman et al.'s teaching that the enzyme granulates may be prepared to contain "0.08 to 26.4 wt% (dry substance) enzyme or enzyme mixture, 96.92 to 43.8 wt% (dry substance without moisture) of a flour type. "

Applicants respectfully submit that Herrman et al. does not anticipate the claimed invention because it does not teach a method of "adding less than 75 of 100 parts by weight of a particulate component...to more than 25 of 100 parts by weight of an enzyme or an enzyme and granulating agent" or the importance of using a particulate component "having a mean size of more than 40 μ m in the longest dimension."

The Office previously relied upon Experiments 2.2, 2.3 and 2.4 of Herrman et al. as teaching the step of "adding less than 75 of 100 parts by weight of a particulate component...to more than 25 of 100 parts by weight of an enzyme or an enzyme and granulating agent." In particular, in Paper 18, the Office referenced Experiment 2.2 (page 24), Experiment 2.3 (page 26) and Experiment 2.4 (page 28) as respectively teaching amounts of 62% for the vehicle and

38% for the enzyme (Experiment 2.2), 61% for the vehicle and 39% for the enzyme (Experiment 2.3) and 71% for the vehicle and 29% for the enzyme (Experiment 2.4).

Applicants responded that the Office used incorrect numbers for calculating the amount of the enzyme. In particular, Applicants pointed out that the Office failed to consider that the amount of enzyme given was stated to be for the enzyme concentrate in granulation liquid not for the dry enzyme content. Applicants corrected the Office's calculation and showed that Experiments 2.2, 2.3 and 2.4 do not teach "adding less than 75 of 100 parts by weight of a particulate component...to more than 25 of 100 parts by weight of an enzyme or an enzyme and granulating agent." Specifically, each example clearly notes that the amount is for aqueous enzyme, each example, however, also provides the percentage of dry substance. When the appropriate calculations are made, that is, the actual enzyme content (appropriately measured by its dry substance content to ascertain its relevance to the pending claims) is factored into the calculation, the amounts of the enzyme equates to approximately 1.69 kg for Experiment 2.2 (page 24), 1.60 kg for Experiment 2.3 (page 26) and 1.25 kg for Experiment 2.5 (page 28), not the much higher amounts relied upon by the Office.

The Office responds that Applicants do not explain where such amounts of dry enzyme are taught by the reference. Accordingly, the Office is specifically directed to the Examples, which state that for Experiment 2.2, that the Enzyme concentrate=granulation liquid was 4.27 kg as compared to 7.0 kg for the vehicle, however, the dry substance content was 39.8 wt%, which translates to 1.69 kg dry substance for the enzyme. For Experiment 2.3, the Enzyme concentrate=granulation liquid was 4.11 kg as compared to 6.3 kg for the vehicle, however, the dry substance content was 39 wt%, which translates to 1.60 kg for the enzyme. For Experiment 2.3, the Enzyme concentrate=granulation liquid was 3.15 kg as compared to 7.0 kg for the vehicle, however, the dry substance content was 39.6 wt%, which translates to 1.25 kg dry substance for the enzyme. Accordingly, each of these enzyme amounts corresponds to less than 25 parts by weight of enzyme or enzyme mixture calculated as dry substance content.

This calculation should not be surprising since it is also consistent with the explicit teaching of Herrman et al. that the enzyme is added in "0.1 to 25 parts by weight enzyme or enzyme mixture calculated as dry substance content of the enzyme and the particulate component, 75 to 99.9 parts by weight (including moisture content) of an organic flour type...." See Herrman et al. at page 3, lines 4-6. This teaching is a direct quote from Herrman et al. and the Herrman et al. teaching is found through-out the document, including as follows:(1) at page 3, line 29-30, teaching the preferred embodiment of 2 to 25 parts by weight of enzyme or

enzyme mixture and 75-98 parts by weight flour; (2) at page 4, lines 2-5, teaching the preferred embodiment of 5 to 21 parts by weight of enzyme or enzyme mixture and 79 to 95 parts by weight flour; (3) in Example 2(a), stating that the composition is 13% wt% enzyme; (4) in Example 2(b), stating that the composition is 18 wt% enzyme; and (5) Claim 1 et seq.

The Office has referred the Applicant to another section of Herrman et al., which the Office states anticipates the claimed invention. In particular, the Office cites page 14, line 25 to page 15, line 8. of Herrman et al. which teaches:

The invention also concerns enzyme granulates prepared by the method in accordance with the invention, which are specially suited for use in washing and cleaning applications. Such enzyme granulates in accordance with with [sic] the invention are especially further characterized by the fact that they consist of a granulate core with the composition 0.08 to 26.4 wt % (dry substance) enzyme or enzyme mixture, 96.92 to 43.8 wt % (dry substance without moisture) of a flour type with a degree of grinding of 30 to 100%, where the flour type was obtained by grinding of a flour source that was optionally washed and/or purified beforehand, and that was treated with dry superheated steam, optionally up to a total maximum of 17.8% customary granulation or formulation agents (calculated as water free substance), and 3 to 12 wt % moisture, where the sum of the constituents of the granulate core (thus the enzyme or enzyme mixture, flour-dry substance, water and optionally granulation and formulation auxiliary agents) amounts to 100 wt %, and optionally from one or more protective layers encasing the granulate core

Applicants respectfully submit that this section of Herrman et al. does not teach "adding less than 75 of 100 parts by weight of a particulate component...to more than 25 of 100 parts by weight of an enzyme or an enzyme and granulating agent." Foremost, the enzyme ratio to vehicle in this section of Herrman et al. do not refer to the ratio used in preparing the granulate, i.e. the method of Herrman et al., rather the ratio specifically refers to the amount in the finished granulate core. In particular, as clearly noted in this section, the granulate core was "prepared by the method in accordance with he invention." The Herrman et al. method, however, as previously discussed, involves adding "0.1 to 25 parts by weight enzyme or enzyme mixture calculated as dry substance content of the enzyme and the particulate component, 75 to 99.9 parts by weight (including moisture content) of an organic flour type." See Herrman et al. at page 3, lines 4-6. The ratio of enzyme to vehicle in the finished granulate core of the composition does not equal the ratio that was added in the process used to prepare the granulate composition.

Further support that this section of Herrman et al. does not negate Herrman et al.'s specific guidance to use "0.1 to 25 parts by weight enzyme or enzyme mixture calculated as dry

substance content of the enzyme and the particulate component, 75 to 99.9 parts by weight (including moisture content) of an organic flour type" is shown in the claims of the Herrman et al. application. Specifically, claims 22 and 23 recite that the enzyme or enzyme mixture in the finished enzyme granulate composition maybe 0.08 to 26.4 wt % (claim 22) and 0.09 to 26 wt % (claim 23). However, both claims ultimately depend from 1, which clearly recites that the granulate was prepared by the method of adding "0.1 to 25 parts by weight enzyme or enzyme mixture (calculated as dry material content of the enzyme preparation that is used)" and 75 to 99.9 parts by weight (including moisture content) of an organic flour." This is consistent with the teaching of Herrman et al.

Thus, although Herrman et al. teach a finished granulate having a ratio of enzyme to vehicle of .08 to 26.4 wt % and 0.09 to 26 wt %, Herrman et al. do not anticipate the claimed invention because they do not teach a method of preparing a granulate by "adding less than 75 of 100 parts by weight of a particulate component...to more than 25 of 100 parts by weight of an enzyme or an enzyme and granulating agent."

Herrman et al. also does not teach the use of "a particulate component having a mean size of more than 40 μm in the longest dimension." The Office refers to secondary references to support that Herrman et al.'s reference to organic flours for a particulate component would be a teaching of a particulate component having a mean size of more than 40 μm in the longest dimension. In particular, the Office states that Herman et al. teach "it is expedient in the method according to the invention to use organic flours that are obtained by grinding of cereal grains, legumes and/or fruits of the Malvaceae family (e.g., cottonseed). The cereals that can serve as flour sources within the scope of the invention are especially wheat or rye." The Office states that common pasta wheat flours are in the 550-150 micrometer granulation particle size range some have a more standardized flour with a granular range of 350-130 micrometers (citing the Handbook of Cereal Science and Technology, Lorenz et al., 1991, page 16) and that corn maize was know to be in the "commonly used particle size range of 100-1000 μm (citing Influence of Particle Size on the Twin-Screw Extrusion of Corn Meal, B. W. Garber et a. Cereal Chem, 74(5):665-661 (1997)). The Office apparently concludes that Hermann et al. reference to flours is a reference to these flours, and thus Herrman et al. teaches this aspect of the claimed invention.

First, Applicants respectfully request that the Office provides Applicant a copy of the art that is now relied upon: Handbook of Cereal Science and Technology, Lorenz et al., 1991,

page 16 and Influence of Particle Size on the Twin-Screw Extrusion of Corn Meal, B. W. Garber et al. Cereal Chem, 74(5):665-661 (1997)).

Nevertheless, nowhere do Herrman et al., as alleged by the Office, reference the use of the specific flours cited in these reference. The flours that Herrman et al. cites are not stated specifically to be the flours of these references. Indeed, the Office is respectfully requested to acknowledge the fact that flours may have different particle sizes, including resulting in a particulate component having a mean size of less than 40 μm in the longest dimension. Thus, Applicants maintain that the Office has not established a basis for a proper anticipation rejection because Herrman et al. does specifically teach using the flours disclosed in Handbook of Cereal Science and Technology, Lorenz et al., 1991, page 16 and Influence of Particle Size on the Twin-Screw Extrusion of Corn Meal, B. W. Garber et al. Cereal Chem, 74(5):665-661 (1997)).

Furthermore, although there may be a teaching of flours which produce a particulate component having a particle size of more than 40 μm in the longest dimension, there is no teaching in the cited references to use such particulate component in the claimed mixer granulation process involving adding less than 75 of 100 parts by weight of the particulate component to more than 25 of 100 parts by weight of an enzyme or an enzyme and granulating agent followed by mixing such components in a mixer granulation process.

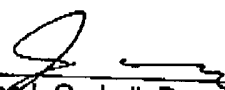
For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 102. Applicants respectfully request reconsideration and withdrawal of the rejection.

IV. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

Date: July 16, 2004



Jason I. Garbell, Reg. No. 44,116
Novozymes North America, Inc.
500 Fifth Avenue, Suite 1600
New York, NY 10110
(212)840-0097